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REMARKS

The Examiner's Office Action of May 8, 2003 has been received and its contents reviewed. Applicants would like to thank the Examiner for the consideration given to the above-identified application.

By the above actions, claims 1-14 have been cancelled, and new claims 15-23 have been added. Accordingly, claims 15-23 are pending for consideration, of which claims 15 and 20 are independent. In view of these actions and the following remarks, reconsideration of this application is now requested.

Referring now to the detailed Office Action, claims 1-14 are rejected under 35 U.S.C. §103(a) as unpatentable over Iwasaki et al. (U.S. Patent No. 6,142,598 – hereafter Iwasaki) in view of Naoji et al. (JP 07- 125311 – hereafter Naoji). In response to the sole §103(a) rejection, Applicants have cancelled claims 1-14 in favor of new claims 15-23, which more clearly define the present invention.

The presently claimed invention utilizes a timing device for generating N sets of driving timing sequence. As disclosed Fig. 10a or Fig. 11a, for example, in the specification, N is 21. Each set of the driving timing sequence is used to sequentially drive M printing elements. As disclosed in Fig. 5, for example, in the specification, M is 8. In the present invention, a reference timing sequence and a random value series are inputted to the timing device. The random value series has N random values, wherein each random value is used to shift the reference timing sequence. Therefore, each scan of M printing elements is driven by one corresponding set of driving timing sequence, which is randomly different from other sets of driving timing sequence for driving other scans of M printing elements.

With respect to Iwasaki, the reference teaches a shift amount setting unit 103, which performs calculation as defined by equation (5) in col. 5, line 26, in which the drive timing is shifted every four dots. Hence, Iwasaki clearly does not teach, disclose, or suggest a timing device, in response to a reference timing sequence and a random value series, for generating N sets of driving timing sequence, wherein the random value series include N random values, and each N sets of driving timing sequence is obtained by shifting said reference timing sequence with corresponding one of N random values, wherein N is a positive integer, as recited in new independent claim 15. Further, Iwasaki does not teach, disclose, or suggest a method including generating a reference timing sequence, generating N sets of driving timing

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sequence by shifting said reference timing sequence with a random value series including N random values, wherein N is a positive integer, as recited in new independent claim 20.

With respect to Naoji, the reference discloses a multi-pass recording method which prints by writing multiple times to a printing field, where a non-printed pixel and a printing pixel and each kind of ink using a different random mask pattern, are disclosed in the machine-translated Naoji reference. Applicants respectfully assert that Naoji is cited merely for disclosing "printing by using a different random mask for each printing area and each sort of ink, in a multi-pass recording system". However, Naoji does not teach, disclose, or suggest a timing device, in response to a reference timing sequence and a random value series, for generating N sets of driving timing sequence, wherein the random value series include N random values, and each N sets of driving timing sequence is obtained by shifting said reference timing sequence with a corresponding one of N random values, wherein N is a positive integer, as recited in new independent claim 15. Further, Applicants respectfully assert that Naoji does not teach, disclose, or suggest a method including generating a reference timing sequence, generating N sets of driving timing sequence by shifting said reference timing sequence with a random value series which includes N random values, where N is a positive integer, as recited in new independent claim 20.

The requirements for establishing a *prima facie* case of obviousness, as detailed in MPEP § 2143 - 2143.03 (pages 2100-122 - 2100-136), are: first, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to combine the teachings; second, there must be a reasonable expectation of success; and, finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. As Iwasaki does not teach, disclose, or suggest a random value series for generating N sets of driving timing sequence, wherein the random value series includes N random values, as recited in instant claims 15 and 20, and as Naoji does not teach, disclose, or suggest combining printing by using a different random mask for each printing area and each sort of ink, in a multi-pass recording system, with the device of Iwasaki, a *prima facie* case of obviousness has not been established.

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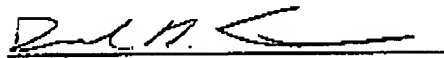
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In view of the amendments and arguments set forth above, Applicants respectfully request reconsideration and withdrawal of all the pending §103(a) rejection.

At this juncture, Applicants would like to point out to the Examiner that Applicants' foreign priority claim was not indicated on the Office Action Summary page, and Applicants respectfully request such an indication be included in future communications.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,


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